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10/571,614	01/10/2007	Hiroyuki Hayashi	5316-0101PUS1	4804

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EXAMINER	
KHAN, USMAN A	

ART UNIT	PAPER NUMBER
2622	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)	
	10/571,614	HAYASHI, HIROYUKI	
	Examiner	Art Unit	
	USMAN KHAN	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 July 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-35* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-35* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 March 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's arguments filed on 07/16/2010 with respect to claims 1 - 35 have been considered but are not persuasive.

2. Please refer to the following office action, which clearly sets forth the reasons for non-persuasiveness.

Regarding **claims 1, 10, 14, and 15**, Applicant argues that Iijima does not disclose or suggest determining, "when a plurality of information relating to the lens position of the peak focus have been acquired, the imaging lens position, the focus lens position for imaging, based on the information relating to the lens position of the peak focus correlated with the information relating to the distribution of high-frequency components and stored in the storage," as recited in claim 1. Claims 10, 14, and 15 are allowable at least for the similar reasons as stated in the foregoing with regard to claim 1.

However, the examiner kindly notes that as shown in figures 8A, 8B, and 14 – 15 the lens positions are detected and as discussed in column 3 lines 18 – 32 and column 12 lines 37 – 51 a method is used to detect the in focus position and high frequency value is used.

Regarding **claims 16 and 25**, Applicant argues that in Fig. 6 of the reference. However, the size of all of the fields is identical and does not disclose or suggest the

"large frame region," the "small frame region," and the "middle frame region" of the present invention.

However, the examiner kindly notes that in column 6 lines 13 – 25 a frame/ window within a whole photographing filed is treated differently. Also the examiner notes that the applicant does not claim that that each of the small and large regions are different non overlapping regions.

3. Applicant has amended the title of the invention to overcome the objection to the specification provided in the previous office action.

Claim Objection

4. **Claim 5** is objected to because of the following informalities: in line 5 of claim 5 “a the” should be amended to read –the--. Appropriate correction is required.

5. **Claim 15** is objected to because of the following informalities: in line 20 of claim 15 “the an” should be amended to read –the--. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1 - 5, 8/2-5, 10, 11/(1-5,10), 14 - 16, 25, and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Iijima et al. (US Patent NO. 6,271,883).

Regarding **claim 1,** Iijima et al. teaches a device for controlling an imaging lens position (column 3, lines 18 – 32; driving focus lens), which performs a control of focusing based on a distribution of high-frequency components of image signals in a frame (column 6 lines 13 – 22, column 11 lines 22 – 28, column 12 liens 37 – 51, column 15 lines 45 – 58, column 17 lines 5 – 20, column 19 lines 56 – 65; high frequency) acquired according to a focus lens position, comprising:

an acquirer that acquires information relating to a lens position of a peak focus (column 6 lines 13 – 22; peak value), said distributing a focus lens position at which an integration value of said high-frequency component (column 6 lines 13 – 22, column 11 lines 22 – 28, column 12 liens 37 – 51, column 15 lines 45 – 58, column 17 lines 5 – 20, column 19 lines 56 – 65; high frequency) in a predetermined area in said frame assumes a peak (column 6 lines 13 – 24; peak value and window);

a storage that stores information relating to the distribution of high-frequency components (column 6 lines 13 – 22, column 11 lines 22 – 28, column 12 liens 37 – 51, column 15 lines 45 – 58, column 17 lines 5 – 20, column 19 lines 56 – 65; high frequency), at the focus lens position indicated by the information relating to the lens position of the peak focus (column 3 lines 18 – 32), the information relating to the distribution of high-frequency components being correlated with the information relating to the lens position of the peak focus acquired by the acquirer (column 3 lines 18 – 32);

an acquirer that acquires selection information indicating which information relating to the distribution of high-frequency components stored by the storage is selected based on the information relating to the distribution of high-frequency components stored by the storage (column 3 lines 18 – 32; correction means); and

a determinator that determines, when a plurality of information relating to the lens position of the peak focus have been acquired, the imaging lens position, the focus lens position for imaging (column 3 lines 18 – 32; correction means; figures 8A, 8B, and 14 – 15; and column 12 lines 37 – 51), based on the information relating to the lens position of the peak focus correlated with the information relating to the distribution of high-frequency components and stored in the first storage, wherein the selection information acquired by the acquirer that acquires selection information indicates that the information relating to a distribution of high-frequency components has been selected (column 3 lines 18 – 32 and column 12 lines 37 – 51).

Regarding **claim 2**, as mentioned above in the discussion of claim 1, Iijima et al. teaches all of the limitations of the parent claim. Additionally, Iijima et al. teaches wherein information relating to the distribution of high-frequency components indicates a size of the high-frequency component (column 6 lines 13 – 22, column 11 lines 22 – 28, column 12 liens 37 – 51, column 15 lines 45 – 58, column 17 lines 5 – 20, column 19 lines 56 – 65; high frequency) corresponding to respective positions of a predetermined area in the frame (column 6 lines 13 – 24; peak value and window); and said acquirer for selection information comprises:

means for computing a high-frequency component index indicating the distribution of high-frequency components in a relationship with the predetermined position in the frame; and means for generating selection information dependent on the high-frequency component index, which generates selection information based on the high-frequency component index (column 6 lines 13 – 22, column 11 lines 22 – 28, column 12 liens 37 – 51, column 15 lines 45 – 58, column 17 lines 5 – 20, column 19 lines 56 – 65; high frequency).

Regarding **claim 3**, as mentioned above in the discussion of claim 2, Iijima et al. teaches all of the limitations of the parent claim. Additionally, Iijima et al. teaches wherein said means for computing the high-frequency component index comprises:

a scanner, which starts scanning information relating to the distribution of high-frequency components in the predetermined position in the frame as a starting position for scanning (column 6 lines 13 - 22; extracting high-frequency component; column 6 lines 13 – 24, window).

Regarding **claim 4**, as mentioned above in the discussion of claim 3, Iijima et al. teaches all of the limitations of the parent claim. Additionally, Iijima et al. teaches wherein said means for computing the high-frequency component index computes information relating to an increase of integration, which indicates an increase of integration value of an image signal along a scanning path of the scanner (column 6 lines 13 - 22; extracting only high-frequency component); and said means for generating

selection information, dependent on a high-frequency component index, generates selection information for selecting information relating to the distribution of high-frequency components having the largest increase according to information relating to the increase of integration (column 6 lines 13 - 22; choosing and extracting only high-frequency component).

Regarding **claim 5**, as mentioned above in the discussion of claim 3, Iijima et al. teaches all of the limitations of the parent claim. Additionally, Iijima et al. teaches wherein said means for computing the high-frequency component index computes information relating to an amount of scanning as the high-frequency component index, which indicates an amount of scanning by the scanner until the maximal value of the high-frequency component of an image signal appears (column 6 lines 13 - 22; choosing and extracting only high-frequency component); and said means for generating selection information dependent on the high-frequency component index generates selection information for selecting information relating to the distribution of high-frequency components having the smallest value of information relating to the amount of scanning (column 6 lines 13 - 22; choosing and extracting only high-frequency component).

Regarding **claim 8/2-5**, as mentioned above in the discussion of any one of claims 2 - 5, Iijima et al. teaches all of the limitations of the parent claim. Additionally,

Iijima et al. teaches a setting unit that sets the predetermined position (column 6 lines 13 – 24, window).

Regarding **claim 10,** Iijima et al. teaches a device for controlling an imaging lens position (column 3, lines 18 – 32; driving focus lens), which performs a control of focusing based on a distribution of high-frequency components of image signals in a frame (column 6 lines 13 – 22, column 11 lines 22 – 28, column 12 liens 37 – 51, column 15 lines 45 – 58, column 17 lines 5 – 20, column 19 lines 56 – 65; high frequency), which is acquired according to a focus lens position, comprising:

an acquirer for information relating to a lens position of a peak focus, which acquires information relating to a lens position of a peak focus, said information indicating a focus lens position (column 6 lines 13 – 22; peak value), at which an integration value of said high-frequency component (column 6 lines 13 – 22, column 11 lines 22 – 28, column 12 liens 37 – 51, column 15 lines 45 – 58, column 17 lines 5 – 20, column 19 lines 56 – 65; high frequency) in a predetermined area in said frame assumes a peak (column 6 lines 13 – 24; peak value and window);

a computer (figure 2a items 53 and 55) which computes a high-frequency component index indicating the distribution of said high-frequency component in a relationship with the predetermined position in the frame (column 6 lines 13 – 22, column 11 lines 22 – 28, column 12 liens 37 – 51, column 15 lines 45 – 58, column 17 lines 5 – 20, column 19 lines 56 – 65; high frequency);

a storage, which stores the high-frequency component index computed by the computer at the focus lens position indicated by the information relating to the lens position of a peak focus (column 6 lines 13 – 22, column 11 lines 22 – 28, column 12 liens 37 – 51, column 15 lines 45 – 58, column 17 lines 5 – 20, column 19 lines 56 – 65; high frequency), in which the high-frequency component index is correlated with the information relating to a lens position of a peak focus, which is acquired by the acquirer for information relating to the lens position of the peak focus (column 3 lines 18 – 32);

an acquirer which acquires selection information indicating which high-frequency component index stored by the storage is selected based on the high-frequency component index stored by the second storage (column 3 lines 18 – 32; correction means); and

a determinator which determines, when more a plurality of information relating to the lens position of the peak focus have been acquired, the imaging lens position, the focus lens position for imaging (column 3 lines 18 – 32; correction means), based on the information relating to the lens position of the peak focus correlated with the high-frequency component index and stored in the second storage, wherein the selection information acquired by the acquirer which acquires selection information, indicates that the high-frequency component index has been selected (column 3 lines 18 – 32; correction means).

Regarding **claim 11/(1-5,10)**, as mentioned above in the discussion of any one of claims 1 – 5 and 10, Iijima et al. teaches all of the limitations of the parent claim.

Additionally, Iijima et al. teaches wherein an image signal is a luminance signal (column 3 lines 18 – 50 and column 5 lines 34 - 52, luminance signal).

Regarding **claim 14,** Iijima et al. teaches a method for controlling an imaging lens position (column 3, lines 18 – 32; driving focus lens), which performs a control of focusing based on a distribution of high-frequency components of image signals in a frame acquired according to a focus lens position (column 6 lines 13 – 22, column 11 lines 22 – 28, column 12 liens 37 – 51, column 15 lines 45 – 58, column 17 lines 5 – 20, column 19 lines 56 – 65; high frequency), comprising:

acquiring information relating to a lens position of a peak focus, which acquires information relating to a lens position of a peak focus (column 6 lines 13 – 22; peak value), which indicates a focus lens position, in which a integration value of said high-frequency component (column 6 lines 13 – 22, column 11 lines 22 – 28, column 12 liens 37 – 51, column 15 lines 45 – 58, column 17 lines 5 – 20, column 19 lines 56 – 65; high frequency) in a predetermined area in said frame assumes a peak (column 6 lines 13 – 24; peak value and window);

storing information (column 6 lines 13 – 22, column 11 lines 22 – 28, column 12 liens 37 – 51, column 15 lines 45 – 58, column 17 lines 5 – 20, column 19 lines 56 – 65; high frequency), indicating the distribution of said high-frequency component at the focus lens position indicated by the information relating to the lens position of the peak focus (column 3 lines 18 – 32), in which the information indicating the distribution of high-frequency components is correlated with the information relating to the lens

position of the peak focus, which is acquired by the step of acquiring information relating to a lens position of a peak focus (column 3 lines 18 – 32);

acquiring selection information indicating, which information relating to a distribution of high-frequency components stored by the step of storing is selected based on the information relating to the distribution of high-frequency components stored by the step of storing (column 3 lines 18 – 32; correction means); and

determining, when a plurality of information relating to the lens position of the peak focus have been acquired, the imaging lens position, a focus lens position for imaging (column 3 lines 18 – 32; correction means), based on the information relating to the lens position of the peak focus correlated with the information relating to the distribution of high-frequency components and stored by the step of storing, in which the selection information acquired by the step of acquiring selection information indicates that the information relating to the distribution of high-frequency components has been selected (column 3 lines 18 – 32).

Regarding **claim 15,** Iijima et al. teaches a method for controlling an imaging lens position (column 3, lines 18 – 32; driving focus lens), which performs a control of focusing based on a distribution of high-frequency components of image signals in a frame (column 6 lines 13 – 22, column 11 lines 22 – 28, column 12 liens 37 – 51, column 15 lines 45 – 58, column 17 lines 5 – 20, column 19 lines 56 – 65; high frequency), which is acquired according to a focus lens position, comprising:

acquiring information relating to a lens position of a peak focus (column 6 lines 13 – 22; peak value) which indicates a focus lens position, in which an integration value of said high-frequency component (column 6 lines 13 – 22, column 11 lines 22 – 28, column 12 liens 37 – 51, column 15 lines 45 – 58, column 17 lines 5 – 20, column 19 lines 56 – 65; high frequency) in a predetermined area in said frame assumes a peak (column 6 lines 13 – 24; peak value and window);

computing a high-frequency component index, indicating the distribution of said high-frequency component in a relationship with a predetermined position in the frame (column 6 lines 13 – 22, column 11 lines 22 – 28, column 12 liens 37 – 51, column 15 lines 45 – 58, column 17 lines 5 – 20, column 19 lines 56 – 65; high frequency);

storing the high-frequency component index, computed by the computing step at a focus lens position indicated by the information relating to a lens position of a peak focus (column 6 lines 13 – 22, column 11 lines 22 – 28, column 12 liens 37 – 51, column 15 lines 45 – 58, column 17 lines 5 – 20, column 19 lines 56 – 65; high frequency), in which the high-frequency component index is correlated with the information relating to a lens position of a peak focus acquired by the step of acquiring information relating to a lens position of a peak focus (column 3 lines 18 – 32);

acquiring selection information indicating which high-frequency component index stored by the step of storing is selected based on the high-frequency component index stored by the step of storing (column 3 lines 18 – 32; correction means); and

determining, when a plurality of information relating to the lens position of the peak focus have been acquired, the imaging lens position, a focus lens position for

imaging (column 3 lines 18 – 32; correction means), based on the information relating to the lens position of the peak focus correlated with the high-frequency component index and stored by the step of storing, in which the selection information acquired by the step of acquiring selection information indicates that the high-frequency component index has been selected (column 3 lines 18 – 32; correction means).

Regarding **claim 16,** Iijima et al. teaches a device for controlling an imaging lens position (column 3, lines 18 – 32; driving focus lens), comprising:

an acquirer, which acquires an image signal from a large frame region in an imaging region and from a small frame region, which is a portion of the large frame region, in which the large frame region and the small frame region are correlated with a focus lens position (column 6 lines 13 – 24; frame/ window);

an acquirer (column 3 lines 18 – 32; focus detection), which acquires contrast information indicating contrast from said image signal, which is correlated with said focus lens position (column 6 lines 13 – 24);

an acquirer, which acquires information relating to a lens position of a peak focus indicating a focus lens position having a peak indicated by said contrast information (column 6 lines 13 – 24; peak value); and

a determinator, which determines suitable focus lens position for imaging (column 3 lines 18 – 32; correction means), wherein said determinator determines the imaging focus lens position if information relating to the lens position of the peak focus is acquired from said small frame region (column 3 lines 18 – 32; correction means),

based on that information relating to the lens position of the peak focus, and if information relating to a lens position of a peak focus is not acquired from said small frame region, based on information relating to the lens position of the peak focus of said large frame region (column 3 lines 18 – 32; correction means).

Regarding **claim 25,** Iijima et al. teaches a device for controlling an imaging lens position (column 3, lines 18 – 32; driving focus lens) comprising:

an acquirer, which acquires image signals from a large frame region in an imaging region, from a small frame region, which is a portion of the large frame region, and from a middle frame region, which includes said small frame region and is included in said large frame region, in which the large frame region, the small frame region, and the middle frame region are correlated with a focus lens position (column 6 lines 13 – 24; frame/ window);

an acquirer (column 3 lines 18 – 32; focus detection), which acquires contrast information indicating contrast from said image signal, which is correlated with said focus lens position(column 6 lines 13 – 24);

an acquirer, which acquires information relating to a lens position of a peak focus indicating a focus lens position having a peak indicated by said contrast information(column 6 lines 13 – 24; peak value); and

a determinator, which determines suitable focus lens position for imaging, wherein said determinator (column 3 lines 18 – 32; correction means) determines an imaging focus lens position based on information relating to the lens position of the

peak focus of said small frame region if the information relating to the lens position of the peak focus is acquired from said small frame region (column 3 lines 18 – 32; correction means), which determines the imaging focus lens position based on information relating to the lens position of a peak focus of said middle frame region if the information relating to the lens position of the peak focus is not acquired from said small frame region (column 3 lines 18 – 32; correction means), and which determines an imaging focus lens position based on information relating to a lens position of a peak focus of said large frame region if the information relating to the lens position of the peak focus is not acquired from said middle frame region (column 3 lines 18 – 32; correction means).

Regarding **claim 28**, as mentioned above in the discussion of claim 8, Iijima et al. teaches all of the limitations of the parent claim. Additionally, Iijima et al. teaches wherein an image signal is a luminance signal (column 3 lines 18 – 50 and column 5 lines 34 - 52, luminance signal).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 6, 8/6, 11/6, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iijima et al. (US Patent NO. 6,271,883) in view of Mikami et al. (US Patent NO. 5,067,161).

Regarding **claim 6**, as mentioned above in the discussion of claim 1, Iijima et al. teaches all of the limitations of the parent claim.

However, Iijima et al. fails to teach wherein the high-frequency component index is barycentric deviation information indicating a distance between a barycentric position of the high-frequency component and the predetermined position; and said means for generating selection information, dependent on a high-frequency component index, generates selection information for selecting information relating to the distribution of high-frequency components having the smallest value of the barycentric deviation information. Mikami et al., on the other hand teaches wherein the high-frequency component index is barycentric deviation information indicating a distance between a barycentric position of the high-frequency component and the predetermined position; and said means for generating selection information, dependent on a high-frequency component index, generates selection information for selecting information relating to the distribution of high-frequency components having the smallest value of the barycentric deviation information.

More specifically, Mikami et al. teaches wherein the high-frequency component index is barycentric deviation information indicating a distance between a barycentric position of the high-frequency component and the predetermined position (column 3 lines 32 – 42; when combined with the teachings of Iijima et al.); and said means for

generating selection information, dependent on a high-frequency component index, generates selection information for selecting information relating to the distribution of high-frequency components having the smallest value of the barycentric deviation information (column 3 lines 32 – 42; when combined with the teachings of Iijima et al.).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the teachings of Mikami et al. with the teachings of Iijima et al. to have a system to provide a good, proper, and reliable object recognition system hence improving the system capability.

Regarding **claim 8/6**, as mentioned above in the discussion of claim 6, Iijima et al. in view of Mikami et al. teach all of the limitations of the parent claim. Additionally, Iijima et al. teaches a setting unit sets the predetermined position (column 6 lines 13 – 24, window).

Regarding **claim 11/6** as mentioned above in the discussion of claim 6, as mentioned above in the discussion of claim 6, Iijima et al. in view of Mikami et al. teach all of the limitations of the parent claim. Additionally, Iijima et al. teaches wherein an image signal is a luminance signal (column 3 lines 18 – 50 and column 5 lines 34 - 52, luminance signal).

Regarding **claim 17**, as mentioned above in the discussion of claim 16, as mentioned above in the discussion of claim 6, Iijima et al. in view of Mikami et al. teach

all of the limitations of the parent claim. Additionally, Iijima et al. teaches wherein an image signal is a luminance signal (column 3 lines 18 – 50 and column 5 lines 34 - 52, luminance signal).

8. Claims 7/(2-5), 9, 11/9, 12/(1-5,9,10), 13/(1-5,9,10), 18 – 24, 26 – 27, and 29 - 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iijima et al. (US Patent NO. 6,271,883) in view of Official notice.

Regarding **claim 7/2-5**, as mentioned above in the discussion of any one of claims 2 - 5, Iijima et al. teaches all of the limitations of the parent claim.

However, Iijima et al. fails to teach wherein the predetermined position is a central point of the frame.

The examiner takes Official Notice that it is old and well known in the art to find the central point of the image and use that position for processing.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to find the central point of the image and use the center point of the image for processing to better balance with the main image so as to improve image quality.

Regarding **claim 9**, as mentioned above in the discussion of any one of claims 1 - 6, Iijima et al. teaches all of the limitations of the parent claim.

Additionally, Iijima et al. teaches wherein the information relating to the distribution of high-frequency components indicates a size of the high-frequency

component corresponding to respective positions of a predetermined area in the frame; and said acquirer for selection information.

However, Iijima et al. fails to teach means for displaying an image of the distribution of high-frequency components, which displays information relating to the distribution of high-frequency components as an image stored in said storage; and means for inputting a selection, which acquires selection information from an operator based on the image of the distribution of high-frequency components displayed by said means for displaying the image of the distribution of high-frequency components.

The examiner takes Official Notice that it is old and well known in the art to display camera/image information such as high-frequency component on a display and having an inputting section for inputting a selection information from an operator.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to display camera/image information such as high-frequency component on a display and having a inputting section for inputting a selection information from an operator so as to quickly and easily inform the user of the system about the parameters of the image hence the user can quickly and easily improve the image using a user input.

Regarding **claim 11/9**, as mentioned above in the discussion of claim 9, Iijima et al. in view of official notice teaches all of the limitations of the parent claim. Additionally, Iijima et al. teaches wherein an image signal is a luminance signal (column 3 lines 18 – 50 and column 5 lines 34 - 52, luminance signal).

Regarding **claim 12/(1-5,9,10)**, as mentioned above in the discussion of any one of claims 1 – 5, 9, and 10, Iijima et al. teaches all of the limitations of the parent claim.

However, Iijima et al. fails to teach wherein an image signal is a signal acquired from one or a combination of RGB signals.

The examiner takes Official Notice that it is old and well known in the art to acquire RGB signals for processing.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to acquire RGB image signals for processing since doing so will require less processing and make the system quicker.

Regarding **claim 13/(1-5,9,10)**, as mentioned above in the discussion of any one of claims 1 – 5, 9, and 10, Iijima et al. teaches all of the limitations of the parent claim.

However, Iijima et al. fails to teach wherein an image signal is a signal acquired from one or a combination of CMYG signals.

The examiner takes Official Notice that it is old and well known in the art to acquire CMYG signals for processing.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to acquire CYMG image signals for processing since these the complementary color filters have a high light utility efficiency hence improving image quality.

Regarding **claim 18**, as mentioned above in the discussion of claim 16, Iijima et al. teaches all of the limitations of the parent claim.

However, Iijima et al. fails to teach wherein an image signal is a signal acquired from one or a combination of RGB signals.

The examiner takes Official Notice that it is old and well known in the art to acquire RGB signals for processing.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to acquire RGB image signals for processing since doing so will require less processing and make the system quicker.

Regarding **claim 19**, as mentioned above in the discussion of claim 16, Iijima et al. teaches all of the limitations of the parent claim.

However, Iijima et al. fails to teach wherein the image signal is a signal acquired from one or a combination of CMYG signals.

The examiner takes Official Notice that it is old and well known in the art to acquire CMYG signals for processing.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to acquire CYMG image signals for processing since these the complementary color filters have a high light utility efficiency hence improving image quality.

Regarding **claim 20**, as mentioned above in the discussion of any one of claims 16 - 19, Iijima et al. teaches all of the limitations of the parent claim.

However, Iijima et al. fails to teach wherein the said small frame member is arranged in the central portion of said large frame region.

The examiner takes Official Notice that it is old and well known in the art to find the central point and central portion of the image and use that position for processing.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to find the central point and central portion of the image and use the center point and central portion of the image for processing to better balance with the main image so as to improve image quality.

Regarding **claim 21**, as mentioned above in the discussion of any one of claims 16 - 19, Iijima et al. teaches all of the limitations of the parent claim.

However, Iijima et al. fails to teach a changer, which changes the arrangement of at least one of said small frame region and large frame region.

The examiner takes Official Notice that it is old and well known in the art to have a changer, which changes the arrangement of at least one of said small frame region and large frame region.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have a changer for arrangement, which changes the arrangement of at least one of said small frame region and large frame region hence the

main subject is always in the small frame region hence making it easier to process the main subject of the image.

Regarding **claim 22**, as mentioned above in the discussion of claim 20, Iijima et al. in view of official notice teaches all of the limitations of the parent claim.

However, Iijima et al. fails to teach a changer, which changes at least one of the size and aspect ratio of said small frame region and/or large frame region.

The examiner takes Official Notice that it is old and well known in the art to have a changer, which changes at least one of the size and aspect ratio of said small frame region and/or large frame region.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have a changer for shape of region, which changes at least one of the size and aspect ratio of said small frame region and/or large frame region hence the main subject of varying size is always in the small frame region hence making it easier to process the main subject of the image.

Regarding **claim 23**, as mentioned above in the discussion of any one of claims 16 - 18, Iijima et al. in view of official notice teaches all of the limitations of the parent claim.

However, Iijima et al. fails to teach wherein a plurality of said small frame regions is arranged in one of said large frame regions.

The examiner takes Official Notice that it is old and well known in the art to have

wherein a plurality of said small frame regions is arranged in one of said large frame regions.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have a plurality of said small frame regions is arranged in one of said large frame regions hence a plurality of main subjects are always in the small frame regions hence making it easier to process the main subjects of the image.

Regarding **claim 24**, as mentioned above in the discussion of claim 23, Iijima et al. in view of official notice teaches all of the limitations of the parent claim.

However, Iijima et al. fails to teach wherein a plurality of said large frame regions is arranged in an imaging region.

The examiner takes Official Notice that it is old and well known in the art to have wherein a plurality of said large frame regions is arranged in an imaging region.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have a plurality of said large frame regions are arranged in an imaging region hence these large regions can be ignored when processing the main small region of the image hence saving time and power.

Regarding **claim 26**, as mentioned above in the discussion of any one of claims 16 - 18, Iijima et al. in view of official notice teaches all of the limitations of the parent claim.

However, Iijima et al. fails to teach wherein said middle frame region comprises a

plurality of middle frame regions having a further inclusive relationship.

The examiner takes Official Notice that it is old and well known in the art to have wherein said middle frame region comprises a plurality of middle frame regions having a further inclusive relationship.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have wherein said middle frame region comprises a plurality of middle frame regions having a further inclusive relationship hence a plurality of main subjects are always in the small frame regions hence making it easier to process the main subjects of the image.

Regarding **claim 27**, as mentioned above in the discussion of claim 7, Iijima et al. in view of official notice teaches all of the limitations of the parent claim. Additionally, Iijima et al. teaches wherein an image signal is a luminance signal (column 3 lines 18 – 50 and column 5 lines 34 - 52, luminance signal).

Regarding **claim 29 and 30**, as mentioned above in the discussion of claims 7 and 8, respectively, Iijima et al. teaches all of the limitations of the parent claim.

However, Iijima et al. fails to teach wherein an image signal is a signal acquired from one or a combination of RGB signals.

The examiner takes Official Notice that it is old and well known in the art to acquire RGB signals for processing.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to acquire RGB image signals for processing since doing so will require less processing and make the system quicker.

Regarding **claim 31 and 32**, as mentioned above in the discussion of claims 7 and 8, respectively, Iijima et al. teaches all of the limitations of the parent claim.

However, Iijima et al. fails to teach wherein an image signal is a signal acquired from one or a combination of CMYG signals.

The examiner takes Official Notice that it is old and well known in the art to acquire CMYG signals for processing.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to acquire CYMG image signals for processing since these the complementary color filters have a high light utility efficiency hence improving image quality.

Regarding **claim 33**, as mentioned above in the discussion of claim 21, Iijima et al. in view of official notice teaches all of the limitations of the parent claim.

However, Iijima et al. fails to teach a changer, which changes at least one of the size and aspect ratio of said small frame region and/or large frame region.

The examiner takes Official Notice that it is old and well known in the art to have a changer, which changes at least one of the size and aspect ratio of said small frame region and/or large frame region.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have a changer for shape of region, which changes at least one of the size and aspect ratio of said small frame region and/or large frame region hence the main subject of varying size is always in the small frame region hence making it easier to process the main subject of the image.

Regarding **claim 34**, as mentioned above in the discussion of claim 19, Iijima et al. in view of official notice teaches all of the limitations of the parent claim.

However, Iijima et al. fails to teach wherein a plurality of said small frame regions is arranged in one of said large frame regions.

The examiner takes Official Notice that it is old and well known in the art to have wherein a plurality of said small frame regions is arranged in one of said large frame regions.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have a plurality of said small frame regions is arranged in one of said large frame regions hence a plurality of main subjects are always in the small frame regions hence making it easier to process the main subjects of the image.

Regarding **claim 35**, as mentioned above in the discussion of claim 34, Iijima et al. in view of official notice teaches all of the limitations of the parent claim.

However, Iijima et al. fails to teach wherein a plurality of said large frame regions are arranged in an imaging region.

The examiner takes Official Notice that it is old and well known in the art to have wherein a plurality of said large frame regions are arranged in an imaging region.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have a plurality of said large frame regions are arranged in an imaging region hence these large regions can be ignored when processing the main small region of the image hence saving time and power.

9. Claims 7/6, 12/6, and 13/6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iijima et al. (US Patent NO. 6,271,883) in view of Mikami et al. (US Patent NO. 5,067,161) and further in view of Official notice.

Regarding **claim 7/6**, as mentioned above in the discussion of claim 6, Iijima et al. in view of Mikami et al. teach all of the limitations of the parent claim.

However, Iijima et al. in view of Mikami et al. fail to teach wherein the predetermined position is a central point of the frame.

The examiner takes Official Notice that it is old and well known in the art to find the central point of the image and use that position for processing.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to find the central point of the image and use the center point of the image for processing to better balance with the main image so as to improve image quality.

Regarding **claim 12/6**, as mentioned above in the discussion of claim 6, Iijima et al. in view of Mikami et al. teach all of the limitations of the parent claim.

However, Iijima et al. in view of Mikami et al. fail to teach wherein an image signal is a signal acquired from one or a combination of RGB signals.

The examiner takes Official Notice that it is old and well known in the art to acquire RGB signals for processing.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to acquire RGB image signals for processing since doing so will require less processing and make the system quicker.

Regarding **claim 13/6**, as mentioned above in the discussion of claim 6, Iijima et al. in view of Mikami et al. teach all of the limitations of the parent claim.

However, Iijima et al. fails to teach wherein an image signal is a signal acquired from one or a combination of CMYG signals.

The examiner takes Official Notice that it is old and well known in the art to acquire CMYG signals for processing.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to acquire CYMG image signals for processing since these the complementary color filters have a high light utility efficiency hence improving image quality.

Conclusion

10. **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

11. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Usman Khan whose telephone number is (571) 270-1131. The examiner can normally be reached on Mon-Fri 6:45-3:15.

13. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

14. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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